

Please add new claims 37-42 as follows:

37. (New) The flow diagnostic system of claim 1 wherein the diagnostic data is indicative of an estimate of a residual lifetime.

Sub  
BP  
38. (New) The flow diagnostic system of claim 1 wherein the diagnostic data is indicative of a failure of a residual lifetime.

A2  
39. (New) The flow diagnostic system of claim 1 wherein the diagnostic data is indicative of an impending failure of a residual lifetime.

40. (New) The method of claim 29 wherein the diagnostic output provides a residual lifetime estimate.

41. (New) The method of claim 29 wherein the diagnostic output is indicative of a failure.

42. (New) The method of claim 29 wherein the diagnostic output is indicative of an impending failure.